**IT Applications Unit 3, AOS 2, Organisations and Data Management**

**Database Design Tools, p 106**

**Naming Conventions**

1. List the naming conventions that can be applied to a database.

Naming Conventions that are applied to a database are the prefix for tables **tbl** (tblCustomer, tblProducts) fields within a customer table prefixed with **cus** (cusCustomerID, cusAddress) queries are prefixed with **qry**, forms with **frm** and reports with **rpt.** The table should reflect the content of the database.

**Entity-Relationship Diagram, (ERD)**

1. Describe the nature of these diagrams.

An entity-relationship diagram is used by designers to establish the different interrelationships between different data elements. ERDs work like a flow chart and use different symbols to represent different elements.

1. Draw the symbols used to represent, entities, relationships and attributes.

ENTITES

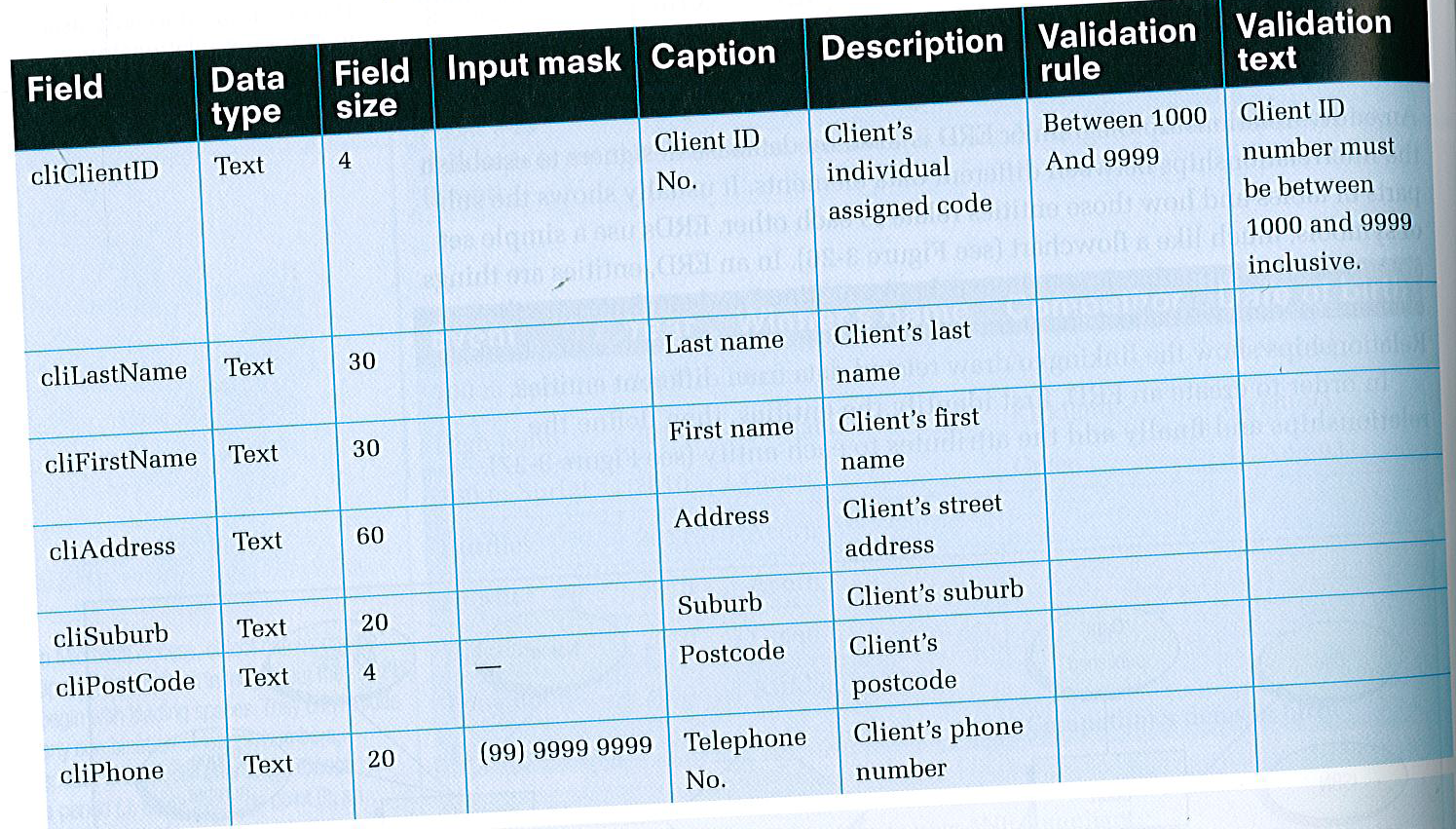
RELATIONSHIPS

1. List the three steps to create an ERD.

First you must define the entities to be used in the ERD, then you must define the relationships between the entities and finally you must add the attributes to each entity.

**Data Structure Table**

1. Draw a diagram of the data structure table which is used to design a new database.



The table is designed to formalise the fields and their data type, format and size. It gives the developer a precise explanation of how each field should be set up in each table. Note: database tables cannot hold formulas.

**Data Structure diagram**

1. What is the purpose of this diagram?

To indicate the relationship that exists between the specific tables of the planned database so that the developer will know how the tables should be linked.

**Query Design**

1. What is a query?

A query is a means of filtering out only the records that meet the criteria of the query. They can be used as a control structure to hold formulas used on forms and on other queries. The result is a list of records that meet the criteria and can be used to generate a printed or electronic report.

1. Distinguish between a primary and a secondary sort

The primary sort is the main way of defining the list or records by eliminating any records that are irrelevant. This leaves you with a broad range of subjects that all have some relevance to the sort, and the second sort defines a unique set of records from the broad list.

1. Read the query criteria that can be used, including symbols, plain text, \*? Wildcards, etc.

**Layout diagram**

1. What does a layout diagram involve?

A layout diagram involves sketching what an input form or the output (reports) of the solutions will look like.

1. List what is contained on a layout diagram.
2. It shows the location of headings, labels and fields. It is also annotated to show formatting details, such as font type and style etc. Any formulas to be used will be shown on the diagram.

**Test Data**

1. When is a set of test data prepared?

It is prepared in the design stage.

1. What is the role of the test data?

Test Data is designed to test all aspects of the solution, including identification and handling of unreasonable or incorrect data. Once they are proven to work correctly, the test data is removed so real data can be entered.

**Validating data**

1. List the available electronic validation checks in the software.

Electronic validation relies on software to perform checks on accuracy, completeness and reasonableness. These are done by range checks, spell/grammar checks, predefined lists, data type checks, input masks, and alignment and IIF statements.

1. What is an input mask?

An input mask can also be used to reduce the chance that invalid data is entered. It can be set for any field that holds text or date-type data and controls show the data can be entered. Display characters are used to indicate where data can be entered. A 9 allows single digit numbers to be entered, L allows any single letter (character) to be entered.